Transmission Business Line
Non-Construction Alternatives Round Table Meeting
Meeting Minutes
March 6, 2003

Members present
Ken Canon, Industrial Customers of Northwest Utilities
Ralph Cavanagh, Natural Resources Defense Council
Art Compton, Montana Department of Environmental Quality
Tom Foley, Non-Wires Study consultant
Nancy Hirsh, Northwest Energy Coalition
Hardev Juj, Seattle City Light
Robert Kahn, Northwest Independent Power Producers Coalition
Tom Karier, Northwest Power Planning Council, Washington state
Paul Kjellander, Idaho Public Utilities Commission
Steve LaFond, The Boeing Company
Sue McLain, Puget Sound Energy
Kris Mikkelsen, Inland Power & Light Company
Bill Pascoe, Northwestern Energy
Heather Rhoads-Weaver, Northwest Sustainable Energy for Economic Development
Margie Schaff, Affiliated Tribes of Northwest Indians, Economic Development Corporation
Brian Silverstein, Bonneville Power Administration
Dick Wanderscheid, city of Ashland
Vickie VanZandt, Bonneville Power Administration

Members absent:
John Savage, Oregon Public Utility Commission

Observers and members of the public
Ken Corum, Northwest Power Planning Council

Project staff present:
Carolyn Whitney, vice president of TBL Business Strategy, Public and Tribal Affairs
Mike Weedall, vice president of Energy Efficiency
Mark Jackson, general engineer of Business Strategy Transmission Marketing
Darby Collins, public affairs specialist
Sally Grabowski, communication assistant
Marion Cox, facilitator

Meeting Notes

8:40 a.m. Due to a local traffic accident, several members of the round table were not present when the following discussion took place.

Brian Silverstein, TBL manager of network planning: The first step towards evaluating non-transmission construction alternatives (NCA) is to define the following terms:

Screening criteria: given certain characteristics, is this a good candidate project for NCA without doing a detailed study.

A detailed study: determines the technical and economic viability of non-wires alternatives.

We will share a detailed study this afternoon -- Kangley Echo Lake -- and then commit to do two to three more projects. You will help us select those. The detailed study will also help us develop screening criteria. Once we've done several detailed studies, we may see patterns. We want to develop screening criteria by our September meeting to allow us to be more efficient by focusing on candidates most likely to succeed.

Projects: We have about 20 identified areas where there are problems on the grid and potential wires fixes have been identified (see the G-20 list).

Pilot program: These field studies will help us determine what technical, economic and institutional issues may apply to NCA. Some are good for conserving energy, but are they good for deferring transmission? We currently have one pilot project underway.

Round table: That's the people here that will help the Transmission Business Line develop insights.

Our planning processes are evolving as to how to deal with studying the system, respond to generation requests in the queue, etc. BPA is a strong supporter of "one utility planning" as if there is only one owner of the transmission system. While that is a good approach to transmission planning, it is not real world. We are trying to use such organizations as the NW Power Pool to develop a common understanding of the grid. Long range, RTO West would be a home for planning issues. We also have a Technical Review Committee made up of customers to review our proposed projects. Another component in understanding the big picture is through long-range studies, such as recommended the in the report “Expansion of BPA Transmission Planning Capabilities” by E3, Foley and Hirst (December 2001).

The generation queue is a process set by the Federal Energy Regulatory Commission. The majority of transmission projects are driven by the need to integrate new generation. A potential generator formally requests to be in the queue and TBL goes through the projects one at a time. At one time, there were 30,000 megawatts of projects in the queue. A number of projects have withdrawn and we should be able to complete an initial pass through the entire queue by the end of this year. A project has little initiative to drop out of the queue. There is a price of admission

and some may ask for a refund when they drop out. The largest driver for dropping out is when a project reaches the environmental study stage, which can cost $2 million or more.

Round table member: This underscores the boom/bust nature of this business and it shows a potential role for this group. One problem with the queue is that there is no way to steer generation to the best site for the transmission system and that affects congestion. Is the TBL just a passive service provider?

Silverstein: Maybe not if we can describe the consequences of locations and then charge for it. Then we have to get to the policy call regarding congestion pricing, requiring advance funding of transmission by developers and other transmission rate design issues. This group ought to make suggestions, but we would need to go through a formal rate process.

Member: The timing issue is that a generator has already chosen a site when they get into the queue. You need to identify the best locations before the generator makes this investment.

Vicki Van Zandt, TBL vice president of operations and planning: The West and Northwest grids are seasonally diverse and the congestion points depend on the season. There are not many points a new generator can run year round without further reinforcements to the system. It may be an advantage to identify areas.

Silverstein: By early 2004 we will have that picture of the grid, with input from you and transmission owners.

Member: Point of fact is there are as many megawatts proposed on the west side along on the I-5 corridor as the east side of the Cascades and both are congested. There are two projects half completed on the west side that amount to 800 MW, others have entitlement, but not the financing. Large baseload plants greater than 350 MW will have problems almost anyplace. Every place and time of year is maladroit. Maybe we need to have the potential to have firm transmission for nine months and non-firm for three months of the year.

Member: It appears the TBL's primary effort in NCA is in demand reduction or power generation. There are other possibilities: utility scale energy storage systems, for example, that provide benefits to the entire system. See example in Alabama by the Tennessee Valley Authority.

Member: We all know that BPA is having financial difficulties, but it also has received additional borrowing authority. We need to see that the resources are available to execute what we come up with here.

9:40 a.m. All members of the round table are present. The meeting officially begins.

Van Zandt: The borrowing authority has strings. When we take to Congress our proposed use of the capital, we will need support from broad groups.

This process is important to the region and us. Part of my responsibility is to plan and operate the grid as well as we can. The grid is in tough shape, not just due to new uses, but its resiliency is also suffering. We've used reactive supply to shore up the system without building new lines, but that has made the system brittle. The problem is not having good enough shocks on the system to protect it.

Marion Cox, facilitator: The outcomes we want today are:

- Review current study methodology to assist BPA in developing a "template" for structuringfuture studies. We want your input for future studies today.
- Select projects for additional study
- We'll talk about additional technologies that could be considered as NCA. We will also talk about this at future meetings, but no specific item will be done before the June meeting.
- We'll begin to discuss institutional issues or barriers.

Mike Weedal, vice president, energy efficiency, BPA: Overview of projects considered to be NCA for both distribution and transmission facilities. See Power Point presentation, "Non-Construction Options and Opportunities" for additional detail.

Orcas Island: One of three underwater transmission cables failed and the decision was to aggressively pursue demand side management until a cable could be constructed in about three years. Specifically to cut demand by 7 MW. The cable was energized last year. The alternative was to build another cable or to ship diesel to the island to run temporary generators.

Portland General Electric is looking at some options, targeting energy efficiency. Oregon Energy Trust has taken up the responsibility for demand side programs.

At the national level, the Department of Energy in 2002 studied the national transmission grid, looking at both transmission and non-transmission alternatives. FERC's Standard Market Design specifically includes demand response . RTO West proposal also incorporates these tools.

New England Demand Response Initiative: This is a policy study with the New England ISO looking at tools, such as demand exchange. There are no plans to roll out pilots or projects yet. They are interested in what we will do, since our experience will come first.

Upstate New York (Northern Oneonta Targeted Demand Side Management Study): There was a capacity problem developing in an area of mostly residential and small commercial electric customers, with mostly gas heating and water heating. They found a limited number of DSM measures that were effective, but since it was a winter peaking system, they were not a good fit. The conclusion is they would need to achieve a 30 percent penetration of measures in the first year. However, other factors transpired and the problem faded away. This shows the need for long lead times in identification of measures and planning.

Pacific Gas & Electric -- Tri-Valley project: This project considered DSM and distributed generation to defer transmission needs. They needed 100 MW to 150 Mw, but thought they could only get 4 MW per year, so they determined they could not scale up to what they needed.

When looking at distributed generation air quality issues, there are considerable problems. They chose rolling blackouts over dirty air, but all was avoided as temperatures cooled.

TBL did something similar with the Kangley Echo Lake project study. Some of the load growth assumptions were optimistic and we challenged those, saying we would not need as much. Still, we couldn't get close fast enough through NCA to go ahead. The PG&E study does point out the need for a rigorous test of the assumptions.

Member: These studies are ad hoc to what we're doing here. We're trying to start the process early and work toward a goal.

Weedall: Toronto Integrated Energy Study: They had some forward-looking leadership as they dealt with some of the same issues we had in Seattle for the KEL. They determined they could get some good savings, but decided in the end not to implement it. Some reinforcement happened, but for alternatives, the leadership was not followed.

Nashville Electric Project and the Distributed Resources Alternatives Assessment did not add significantly to our work.

Mike Hoffman, BPA: See Power Point presentation, "Non-Construction Options and Opportunities," beginning at "Non-Wires Alternatives to Transmission," page 24, for additional detail.

For a long time we've looked at other alternatives rather than build new lines, such as reconductoring, Remedial Action Schemes, but these have also caused the system to be more brittle. BPA's Slatt substation, providing flexible transmission, was one of the first in the nation. The Beowulf Cluster involves using PCs in real time to solve problems.

All of the transmission alternatives roll up from the distribution system. If we could build a good enough model from the distribution system up we could do a lot, but most utilities can't do this kind of modeling yet.

Van Zandt: Overuse of capacitors to solve these problems, not RAS, has caused the system to become more brittle. If we want more transfer capability from the system, we can do one of three things:

1. Make the voltage higher by adding shunt capacitors.
2. Reduce the impedance such as building lines.
3. Deploy non-construction alternatives.

We need to keep the system relatively tight around a certain voltage level. We can add shunt capacitors that are relatively inexpensive to boost voltages and deliver more power. We still must stay within a voltage band. Capacitors make the system brittle.

We've also gotten a ton out of the remedial action schemes (RAS).

Member: We need to add someone from operations to this group.

Hoffman: Smart Grid -- participation in EPRI Consortium for Electric Infrastructure for a Digital Society. Our issue due to the budget is whether we can continue to support this. We are continuing wide area control system research.

BPA operated an early superconducting magnet storage facility in the early 1990s. It was used for system protection.

One thing not included in the Energy Efficiency slide is the Northwest Energy Efficiency Alliance's conservation voltage regulation project. That has the potential to save tens of megawatts.

Demand Exchange: We began this in late 1999 and 2000. In August 2000, we had 53 MW in the demonstration program and the trading floor asked for more. Because of the aluminum smelters, we had 800 MW by December. It's simple -- we use an e-mail or page the customer. This is just BPA. Other utilities such as PacifiCorp, PGE and others also have Demand Exchange capabilities. However, in the future we may be unable to call upon the DSIs.

Load Center Generation: These are smaller combustion turbines near load centers for peaking. They are expensive and there are air quality issues associated with them…or, we can use microturbines in commercial buildings. See the 200 Market Building in Portland as an example. It is the first in the country to use both heat recovery and chilling. Real time information on how it is working is on the BPA web site (www.bpa.gov). Tax credits are available in some states for systems such as this.

Member: This type of technology should also be considered in industrial applications.

Member: Where do appliances come in?

Hoffman: Most of the advanced technology is not ready for prime time, such as electricity storage. Regenysis in the UK is installing 120 MWh of storage. Literally, this is snap together fuel cells. There is one being installed in Columbus, Miss. for TVA at a cost of about $25 million, excluding site costs.

Also, PacifiCorp is installing a VanTech 250 KW flow battery in Moab, Utah for peaking with no emissions. There are business issues with that, but not technology issues.

Energy Web: This integrates a diversity of resources, which gives it a lot of potential for working with existing systems. The biggest challenge to us is to ensure that everyone gets a piece of the value - the generation system, the transmission system, customers, etc. BPA (BPA Environmental Foundation has lead) has applied to DOE for a grant.

Member: Five to ten years ago the move towards an energy web was viewed by utilities as a path to the disintegration of the distribution system. This is the opposite. You need to convince managers of distribution systems to see that value and may need to provide the right signals to do that.

BPA Fuel Switching Policy
Weedall: In a letter to the Northwest Power and Conservation Council (Sept. 14, 2001), BPA clarified its position on using fuel switching as an energy efficiency measure. BPA has determined that the market-based approach is still appropriate. A reading of the NW Power and Conservation Act, it is hard to find fuel switching in either conservation or resource acquisition.

Member: I thought we had clarity that fuel switching is permissible for electric resistance water heating. The Northwest is the last place with electric water heating. Can't we just drive it off the system?

Hoffman: With GIS mapping technology, we could overlay where there is/is not gas distribution and see where the opportunities are, but in central Washington, for example, there is no gas. According to NW Natural, the value for water heating could be as much as 700 MW and 1,500 for resistance heating.

Mark Jackson, TBL Transmission Marketing general engineer: NW Natural several years ago offered water heater conversions.

Member: Home conversions can be expensive, require significant remodeling expense in some cases.

Member: If it's not conservation or load management, why not consider it to be load reduction?

Weedall: We differentiate between fuel switching and load management. Milton Freewater turns off water heaters when they need to clip their peak. Fuel switching removes load, the other clips peaks. Cost-benefit ratios are likely different between the two.

Silverstein: After fuel switching the load is gone all the time, so from a transmission load standpoint that is a benefit.

Non-construction alternatives -- a wish list:
Cox: Many of you wanted the assurance that BPA would look at the full complement of options. What alternatives should be included?

Member: We need more discussion on **biomass** and **biofuels**.

Weedall: BPA is working with Tillamook PUD on an Energy Web project for methane digesters (anaerobic digesters).

Hoffman: Angus Duncan, BEF, wants to put on rubber bladder and catch the gas to use for peaking, which is one of this technology's higher values (1000 cows/MW).

Member: This could be a pilot project.

Weedall: The Energy Web is trying to leverage existing projects. We are not in a monetary position to consider this.

Silverstein: Our focus here is on deferring transmission.

Member: Wastewater treatment plants could be both DSM and methane.

Olympic Peninsula Reinforcement Project and Non-Construction Alternatives
Silverstein: BPA has extensive experience with Demand Exchange for the PBL, now this is about the transmission system. We've identified a transmission constraint on the Olympic Peninsula. This is one of the G-20 projects. It seemed like low-hanging fruit in terms of looking for NCA.

Jackson: Our studies show that extra heavy winter loading in 2006 could lead to a voltage collapse. We also know that a double outage (N-2 contingency) could also result in a voltage collapse. With updated load forecast and low load growth, BPA has moved this project out a little and we have more time to respond and that buys us some time to test options.

This is in an area without natural gas from Shelton to Port Angeles, with one DSI customer affected. There is little insulation in homes that have all electric heat. Our choices are to keep the system from experiencing peaks or to add transmission. There has been some capacitor additions, but that option will shortly be at a maximum. Building transmission would cost about $25 million, so whatever we do must cost less than that.

Silverstein: One of the issues for a detailed study is that it is well within our means to survive a single contingency outage with NCA, but is it possible if we have a double contingency outage?

Jackson: One reason this is a good pilot project is that we have a dead end line. It only serves the Peninsula. We get the full benefit for each megawatt reduced.

We could lick this problem if we could site a 500 MW combustion turbine near Port Townsend, but there is no gas line. However, if we only need to address the peaks of about 40 hours per year, we could use portable generators. Market based demand reductions could reduce the use of expensive peak market power, but our need does not necessarily coincide with the power market.

So we could go to large industrial customers with a Demand deferral program, but there are only four to five customers with demand over 5 MW. The largest, the Navy with 20 MW of generation, turned us down. There is an institutional barrier.

Member: Is the use of small generation a legitimate demand response? It's difficult to think of diesel generation as a part of this, but it was surprising to see the number of diesel generators used in 2000-01 even when the system was not in collapse.

Jackson: If we are truly experiencing a collapse, those generators will come on anyway. Other industrial possibilities on the Peninsula are pulp and paper mills. We could encourage a large industrial load to move to off peak.

In addition, there is 1 MW of wave power generation proposed at the tip of the Peninsula, but that is unlikely because it is in a marine sanctuary, and there is up to 10 MW of proposed wind generation.

Member: What's fascinating is how many things that could be happening on the generation side. Duke wants to build a gas pipeline. The tribes want to build a wind farm, which could proved some interesting voltage control problems at the end of the line, and the Elwha dams will be removed. For a small place, there is a lot of action.

Jackson: We can tailor the Demand Exchange program to those changes.

Member: You may want to talk with Blue Heron here in Portland about the potential for demand reduction at pulp and paper facilities. Typically, the plant would need additional stock storage so it can shut down for a short period of time. Some can, some need to make a capital investment to develop the capability.

A secondary issue is how likely is a customer who signs to actually participate when called on?

Jackson: Notification works now. We set up now for day-ahead scheduling. We notify by the hour and the amount we're willing to pay for the following day. The customer can push back on the price up to the closing hour. We can notify individuals or groups based on similar resources. That can also be broken down by size. We've tried to make this as flexible as possible to accommodate policy calls. It could potentially be expanded to the entire region.

Can we predict and can we react with a notification? That will depend on the response from the market. We have limited dollars to do a pilot project, so not sure how well we can test this, especially during a persistent cold spell. To be effective, we need a response every day to shave the peak. A pilot to replicate the real world is useful if we understand the differences.

Member: There may be another option on the price. Maybe some industrial users would take a lower price if they were able to call on other resources.

Member: Why not look at interruptible contracts?

Silverstein: That is another model we could pursue. Some people say that a contractual basis is better than market-based, but why not try both?

Member: It looks like all bids would be voluntary. You may not need this often, but when you do, you really need it.

Jackson: It's a nice market-based way to do it rather than to just turn off loads. It is voluntary. If they do not respond there is a two-to-one penalty, plus three strikes and they're out of the program. The pilot would explore a variety of contractual options for obtaining demand deferrals and TBL would approach large industrial customers with options such as guaranteed payment for a fixed number of deferred load hours, open demand market, “whatever works for the customer will work for the program”

Member: I see the biggest bang in the demand exchange. Are you doing an assessment of the conservation potential? That would be an important tool.

Jackson: Yes. But, what we're trying to do here is to set up a platform for dispatchable demand reduction. Those things that reduce energy use are less attractive to the transmission system than those things that can be called on when needed. Conservation is more valuable to the PBL than it is to the TBL.

Member: That depends on if there is enough time to accumulate a lot of DSM resources.

Silverstein: We've shown this program, which is in actual field-testing. We want your input on how to make this project and demand exchange more cost-effective. Also, to whet your appetite, what can we do in the future with demand exchange?

Member: There are three values to consider: to the transmission grid, to the distribution grid and to generation and it seems you're only looking at one part of the whole value. That's the glory of the one utility concept. It aspires to see all values. If we could do that, the value of DSM rises.

Have you discussed this project with Puget Sound Energy? TBL can develop the transmission value, while Puget develops the DSM. We need to figure out a way to capture the entire value.

Silverstein: Yes, we've discussed this with Puget. That gets to institutional issues.

Today we're taking your input on how to improve this project and we are developing a budget for next year. We'll set the budget amount in the next 60 to 90 days, so will need to finish this up by our next meeting in June.

Members' suggestions on funding: DOE grants. Grants from the USDA under the recently approved farm bill's "value added" program and Sec. 906 rebate program.

Kangley-Echo Lake Economic Screening and Sensitivity Analysis

Silverstein: We have proposed three projects to fix transmission congestion in Puget Sound area. One of them is the Kangley-Echo Lake project. This is one project we've done a more detailed study on and the National Environmental Policy Act review is in full swing. Public comment closed March 1.

In reviewing the study, the round table was asked to focus was on:
1. The economic perspective: who benefits, who pays, who implements?
2. Load forecasts
3. Project or site specific vs. the big picture. We focus on KEL, but how does it fit into the grid as a whole?
4. Long lead times. It takes a long time to build a transmission line, but some of these demand response programs also take a long lead-time and that became a factor.

Tom Foley: Our goal was to identify cost-effective technical alternatives to KEL and to evaluate their cost-effectiveness. (see presentation materials and contractor's report).

Member: I would hope you mean cost-effective, but not all are. You chose one alternative that was more expensive than another.

Foley: One of the problems is who pays, who benefits and how to charge people who benefit. We also had to look at whether an alternative was sufficient to defer the line.

Our alternatives included DSM, demand response and generation and strategically sited distributed generation. DSM were mostly energy efficiency measures rather than peak shaving. We considered 1,533 different measures, many with deemed savings.

Demand response addressed capacity. Price-based dispatch programs offer customers incentives to be interrupted.

We also looked for existing generation, new larger scale generation, old distributed generation, new distributed generation and the availability of natural gas.

Eliminating the line proved to be a non-starter, but deferring might have been possible. Clearly there were benefits for the alternatives, but the need was only a year out.

Silverstein: The need date could be extended three years without the Canadian Entitlement Treaty. The treaty jumps in April 2003 from 600 MW to 907 MW (in reality the problem appears in the winter 2003/04) and to 1,179 MW in 2007.

One issue is how to come up with a load forecast and the impacts of weather on that forecast. Larger utilities provide that to us and BPA provides it for the smaller utilities. While it varies, extreme cold weather events could cause load to jump as much as 15 percent.

Foley: A lot of load forecasts are based on 1998 peak load, with subsequent years based on annual growth estimates. One question is has this changed?

Silverstein: Our forecast was updated in the fall 2002. We saw reductions of 12 to 15 percent, which allowed us to move this project out one year.

Van Zandt: Compliance with reliability criteria assumes the system is intact.

Silverstein: But it also assumes all other facilities are in service, when the reality is that some part of the system is out of service everyday.

Member: I've been told there is greater interchangeability of spare parts among transmission systems in the Northwest than elsewhere in the country. With better stockpiling of parts, does that change the evaluation?

Van Zandt: Yes, but that doesn't change the vulnerability of the system. It's not inconceivable to lose more than one facility in Puget Sound.

Silverstein: The interconnected nature of the grid makes it more difficult for demand response to relieve the overload. Unlike the Olympic Peninsula, if we reduce 100 MW of load, on average we only get a 32 MW reduction at the overloaded transformer in King County. This makes the measures more expensive.

Member: Are you sure there aren't benefits elsewhere in the system?

Silverstein: If you look at the G-20 projects, the Monroe to Echo Lake project to some extent could benefit from load reduction, but that is really driven by new generation, so there may not be other transmission deferral benefits in this area.

Member: There are two lines in this area that could benefit from this project. Are those benefits counted?

Silverstein: They don't have to fix the other lines if we do this. Kangley-Echo Lake fixes a bouquet of problems in Puget Sound.

Member: If we only need this line when it is cold -- 10 hours -- can we move the Canadian Entitlement out for that 10 hours? Then we wouldn't need to talk about the alternatives.

Silverstein: I'm not sure how many hours it's needed. The consultants estimated 10 hours for the winter 2003/04 time period based on the 1989 and 1990 cold snaps. But you can't exactly estimate a cold snap and when it would be needed, so we would actually need it for more time. However, reliability requirements are triggering a need to do something and we can't ignore that.

Member: The RIM test is bizarre in this context: counting reduced revenue as a cost.

Silverstein: Lost sales is not a big driver for demand response because revenues are only lost when the line is out.

This is not a good project for NCA for a number of reasons, including the fact that we are behind the eight ball on it, but there are other projects.

Member: Given what you know from this project, what would the appropriate lead-time be? The answer could help us decide which projects to pursue.

Foley: If we can resolve institutional relationships, projects may go quickly. BPA would have to get more than 300 MW of demand response in just one year for KEL. In three years they will need participation by 28 percent of the industrial load 1 MW and larger.
Demand response is the most cost-effective from the TBL perspective because it focuses on the hours the capacity is needed.

Silverstein: 28 percent is a huge penetration in participation in demand response. Historically, it ranges from 5 percent to 18 percent.

Foley: If there is a longer time to enlist, then could reach 28 percent.

Member: Over time you will lose some people as you gain people, so it will balance out.

Carolyn Whitney, TBL: By the June meeting BPA plans to kick off two to three more detailed studies. Is there anything really critical that we need to change to this template and could that affect those studies?

Member: The analysis says that the need for transmission must be driven by domestic load. Is the Canadian Entitlement a proxy for the wholesale transactions in the area? If so, who gets the value of the deferral? BC Hydro?

Member: The fundamental problem is that value is placed on generation, not on transmission.

Silverstein: So far you've told us:

- To look at the benefits to other transmission projects.
- To treat transmission service for wholesale transactions different than native load service.

There isn't a "do nothing" alternative in the consultants study. However, we do a NEPA study, we have to provide a "do nothing" alternative. Although there is a low probability of an event, there are big consequences.

Van Zandt: The Northern Puget Sound Curtailment Plan is a bad "do nothing" alternative.

Future projects - selecting projects for additional analytical study

Cox: We're not trying to reach a group decision, but we'd like to hear from you which of the G-20 projects would tend to be good case studies. Ultimately, TBL will decide.

Silverstein: We're looking for two to three more projects. The projects must:

1. Address a real problem. All on the G-20 list do.
2 The need has to be far enough off in the future for us to respond in time. KEL did not allow that.
3 Projects that provides a big bang for the buck, like the Olympic Peninsula project.

Member: DSM solutions work best if coupled with other partners/sources of funding, i.e. in Oregon and Montana because of the funds available in those states.

Member: Also where retail access chews through one of the institutional barriers.

Member: I'd like to hear more about how Contract Lock will affect this.

Cox: Contract Lock has a weekly meeting and information is available on the web at http://www2.transmission.bpa.gov/business/ContractLock/contractlock.cfm.

Member: Should we do a new generation project?

Silverstein: Isn't locational pricing the way to deal with that? I'm not sure how to explore a generation project based on the KEL analytical model.

Member: Whatever projects are chosen, there should be multiple parties involved in order to break through the institutional barriers. One criterion should be are there other sources of funding?

Member: The more parties, the more we learn, but also the higher the probability of failure.

Member: We should pick a project that's urban and one that is rural to compare the success of demand response. We could also look at one with generation potential. It doesn't have to be a central-generating station. It could apply to the G-12. Also, different-sized projects.

Member: The urban project could look closer at DSM as opposed to demand reduction.

Member: You should run all G-20 projects through the criteria of cost, timing, potential, etc.

Silverstein committed to do that.

Potential Projects

Silverstein:

The timing on G-8, Monroe to Echo Lake, has been delayed, so it clearly fits the timing window. In fact, it is the only other remaining project in the high priority (G-9) list that fits from a timing perspective. However, it is driven in large part by new generation that may not get built and we don't know how to do an analysis for new generation. From a construction standpoint it may make KEL look like a cakewalk. I do understand what the alternatives would be except pricing or telling the generator not to build.

G-12, the Olympic Peninsula additions, would work well.

G-19, Northwest of Idaho reinforcement. The date will fall back with slow growing load. $100 million is very expensive. We could do a true integrated plan. BPA will continue to look to determine if there is a third project to analyze this year.

Member: Irrigation drives the load.

Member: Large wind projects proposed for the area.

Silverstein: We may only have two or three projects, but it gives us a variety: a chance to do an integrated resource plan and a rural project (urban would have been KEL). We need to get the study done by Sept. 30.

Institutional Issues
See "Suggested Matrix for Grouping Institutional Barriers.
The matrix contains a list of institutional issues cross-referenced to those who have the potential to address the issues.

Foley: A lot of non-wires alternatives cannot be done without first resolving some institutional issues. For example, with KEL we would have had to do a blitz and to do that we would have already had to establish relationships, which we couldn't do in a short time.

The intent is to overcome the issues, not just to identify them. For example, lost revenue could be addressed through decoupling, so you would need state utility commissioners to help. DSM measures like compact fluorescent lights could address peak, so BPA could do that and others.

Member: It would be a good idea to put together teams to address these issues, not to do them in this meeting.

Foley: We can add to the matrix institutional issues, as well as those who can address the issues, and we must write clearly in the boxes what the actors must do, but this clearly needs to be done by the June meeting. These are people who must act early as BPA begins non-wires solutions.

Additional comments from members:

We need to add societal barriers.

The list is utility-centric. There is a lack of understanding in the public about the critical role transmission plays to provide electricity. There is no bigger barrier when people show up at a hearing.

The flip side of that customers have high expectations of performance. When something happens they don't get mad at BPA, but at their provider.

Short term rates.

Do we need someone on this group from siting councils?

Do we need to broaden for multi-jurisdictional utilities?

State commissions have different perspectives, but they all aren't represented here.

We don't have legislators from all four states.

No theological debates.

Cox: BPA chose this group based on its breadth of experience.

Member: This group of volunteers should reach out to others.

Member: When I saw the institutional barriers, I thought it referred to barriers to BPA to finishing a project. The problem is, we can't fix any one of these. For example, FERC and states can't agree on standard market design. We often can't get four state commissions to agree on issues. State legislators make fun of each other based on how they address deregulation. Publics are another issue.

Silverstein: Some issues are doable in our lifetimes, some are not.

Action:
- Refine and expand the list of issues
- Clearly define each issue
- Identify who can resolve the issue
- Provide wording describing each actor's responsibility
- Report back to June meeting.

Volunteers:
Ken Corum -- Northwest Power and Conservation Council
Ken Canon
Sue McLain
Paul Kjellander volunteered an Idaho PUC staff member
Robert Kahn
Kris Mikkelsen
Steve LaFond

Foley will be the responsible party. He will e-mail or call volunteers to begin process. Will try to use e-mail to do the work, but if it is not productive, will set up a conference call.

Next Meeting
Next meeting is June 19 at BPA Headquarters, room 122.

Whitney: At the next meeting, prior to the September meeting when all this has to be done, we will discuss:
- Institutional barriers
- Screening criteria. Needed by September meeting. BPA will offer draft criteria to begin discussion.
- Pilot projects
- Status report on detailed analyses, which will feed the screening criteria.
- Brief status report on Contract Lock. In the meantime, will provide internet link

Members opposed a proposal to have a two-day meeting, instead preferring a brief conference call -- no more than one hour -- before the day of the meeting designed to better focus the all-day meeting.

Whitney: There is the potential we would have a meeting in between the June and September meetings.

Jackson: I can facilitate a subgroup to discuss other options for the Olympic Peninsula study. We can add measures any time, but need to discuss them upfront.

Cox: Please send me feedback about the quality of this meeting by e-mail.

Meeting adjourned at 3:45 p.m.